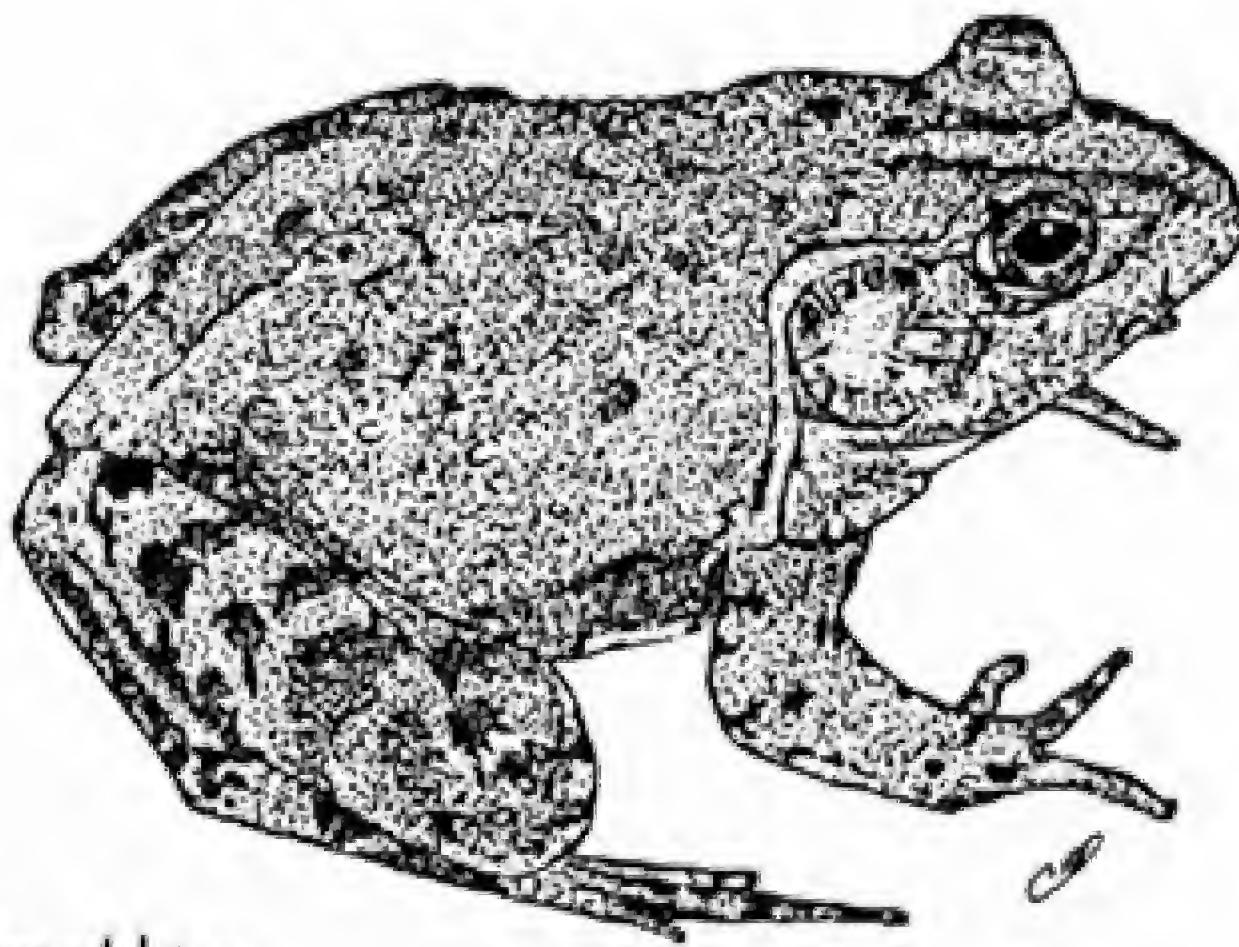


# GATESBEIANA



*Rana catesbeiana*  
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## BULLETIN INFORMATION

*Catesbeiana* is issued twice a year by the Virginia Herpetological Society. Membership is open to all individuals interested in the study of amphibians and reptiles and includes a subscription to *Catesbeiana* and admission to all meetings.

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## EDITORIAL POLICY

The principle function of *Catesbeiana* is to publish observations and original research about Virginia herpetology. Rarely will articles be reprinted in *Catesbeiana* after they have been published elsewhere. All correspondence relative to suitability of manuscripts or other editorial considerations should be directed to Co-editors, *Catesbeiana*, Department of Biology, Liberty University, Box 20,000, Lynchburg, VA 24506.

### Major Papers

Manuscripts being submitted for publication should be typewritten (double spaced) on good quality 8½ by 11 inch paper, with adequate margins. Consult the style of articles in this issue for additional information. Articles will be refereed by at least one officer (past or present) of the Virginia Herpetological Society in addition to the editor. All changes must be approved by the author before publication; therefore manuscripts must be submitted well in advance of the March or September mailing dates.

Reprints of articles are not available to authors; however, authors may reprint articles themselves to meet professional needs.

(Editorial policy continued on inside back cover.)

**CATESBEIANA**  
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**MEETING NOTICE**

The Fall 1995 VHIS meeting will be held on 28 October 1995 at Liberty University in Lynchburg, VA. See pages 57-58 for details.



## AMPHIBIANS AND REPTILES FROM CANDLER MOUNTAIN, CAMPBELL COUNTY, VIRGINIA

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Candler Mountain is one of a small group of mountains, including Jack, Long, and Tobacco Row Mountain in the Piedmont province of central Virginia. It lies on the southwest edge of the City of Lynchburg with its western slope within the city and its eastern slope in Campbell County. Lynchburg Municipal Airport is about 2 km to the SW of its southern end. It is bounded on the west by US 460, on the north by US 501, the east by Co. Rt. 677, and the south by Co. Rt. 670. Candler Mountain is just east of Liberty University's campus. Most of the mountain is covered by hardwoods with some pines mixed in. One of the peaks was burned in the summer of 1985 and is currently undergoing succession with grasses and young pines predominating.

What makes Candler Mountain particularly interesting is the diversity of herps found there. A number of Campbell County records for common species have come from Candler Mountain and were reported in earlier issues of this journal. It would appear that Campbell County has not previously received a systematic survey, as so many distribution records for relatively common species have been reported in the recent past. The large diversity of species can probably be attributed to the relatively undeveloped condition of this area. It is, therefore, unfortunate that much of Candler Mountain is slated for urban development. Although the development is being planned as "environmental friendly" with attempts to maintain a complete forest canopy cover, one can not help but think that yet another important natural area will soon be gone.

### Methods and Materials:

Candler Mountain has not been surveyed in a systematic fashion. There are several areas where intense research projects or class surveys took place over short periods of time. This report represents a summary of five years of field observations. Where unvouchered observations were made, the exact date of observation may not be known.

All collections were made by use of hand or net capture. Specimens were taken for county record vouchers or a small number of specimens for the Liberty University teaching collection. Many specimens were captured, identified and released.

Several areas were surveyed more extensively than most. Camp Hydaway, on Co. Rt. 677 1.0 km N of Co. Rt. 670 was surveyed extensively in May of 1990, 1992 and 1994 as part of a Vertebrate Natural History field course. It has also been surveyed in recent years by Liberty's ecology class. Numerous observations were made during a multiple year mark-recapture study of *Sceloporus undulatus* at an old sawmill site on the southern end of the mountain, approximately 1.5 km NNW of Lake Hydaway. Opossum creek runs down the valley between Candler and Jack Mountains, being fed by tributaries coming off both mountains. Lake Hydaway is a two hectare lake in Camp Hydaway on the southeast side of the mountain, formed by damming Opossum Creek. There is a small unnamed pond on the eastern side of Co. Rt. 677, opposite Lake Hydaway.

#### Results:

An account of each species observed is given below. The geographic area and microhabitat where the species was observed is indicated, as well as comments on its relative abundance. Lastly, a summary table is presented, listing all species expected from Campbell Co., based on records from Tobey (1985) and Mitchell (1994) indicating those actually observed, those not found, and those which represent county distribution records.

#### Turtles

*Terrapene c. carolina* (eastern box turtle): Box turtles occur commonly in all terrestrial areas of Candler Mountain.

*Chelydra s. serpentina* (common snapping turtle): Snapping turtles were observed only from Lake Hydaway, and in low numbers.

*Chrysemys p. picta* (eastern painted turtle): Numerous hatching painted turtles, and shells from adults were observed in Lake Hydaway and the small unnamed pond opposite Hydaway on Co. Rt. 677.

*Pseudemys c. concinna* (river cooter): Two hatchling river cooters were

## HERPS OF CANDLER MOUNTAIN

collected from the beach area of Lake Hydaway in May 1994.

### *Lizards*

*Sceloporus undulatus hyacinthinus* (northern fence lizard): Fence lizards are very common and numerous from all the forested areas of Candler Mountain. Mitchell (1994) lists Campbell County among those with unvouchered records. Two specimens are being submitted to the Virginia Museum of Natural History to verify this record.

*Eumeces fasciatus* (five-lined skink): Five-lined skinks are also very common and numerous from all forested areas.

*Eumeces laticeps* (broad-headed skink): Broad-headed skinks were captured for positive identification only from the old sawmill site on the southern end of the mountain. Large skinks were also observed on trees around Lake Hydaway and probably occur in low numbers, but were never captured for positive identification. Mitchell (1994) cites unvouchered records for Campbell County. Photographs of an adult female are being submitted to verify this county record.

*Scincella lateralis* (ground skink) Ground skinks were found under logs in several areas, including the old sawmill site, and are relatively common. However, no vouchers are apparently available from Campbell County (Mitchell, 1994). Therefore, Campbell County and Candler Mt. in particular should be searched for a voucher specimen for this species.

*Cnemidophorus s. sexlineatus* (six-lined racerunner): Racerunners are uncommon in central Virginia. A breeding population apparently exists on Candler Mt., as a gravid female was captured in May 1995 along the power line right-of-way NE of the unnamed pond across Co. Rt. 677 from Camp Hydaway.

### *Snakes*

*Storeria o. occipitomaculata* (northern red-bellied snake): The red-bellied snake is rare in central Virginia. A new county record was reported (Sattler, 1990) from just W of Lake Hydaway. At least one other specimen was observed in June of 1993 just W of the unnamed pond, suggesting there is a breeding population on Candler Mountain.

*Carphophis a. amoënius* (eastern worm snake): Worm snakes are common on the mountain, being found under logs, rocks and other debris.

*Elaphe o. obsoleta* (black rat snake): The black rat snake is relatively common in this area. It is generally found in forested areas where they forage.

*Elaphe g. guttata* (corn snake): Corn snakes are becoming rarer due to collecting for pets. Since Candler Mountain has been relatively undeveloped, there has been a thriving population in this area. They have been found in several forested areas, particularly under large pieces of wood around abandoned houses.

*Coluber c. constrictor* (northern black racer): Racers are also fairly common in this area. Several adults have been observed around Camp Hydaway and throughout the forested areas.

*Nerodia s. sipedon* (northern water snake): Water snakes are common along the shore of Lake Hydaway. Some specimens have been observed along Opossum Creek, under rocks along the shore.

*Thamnophis s. sirtalis* (eastern garter snake): Garter snakes are not common in central Virginia, but can be found particularly along streams. At least one specimen was observed along a tributary to Opossum Creek.

*Regina septemvittata* (queen snake): Queen snakes were observed in shrubs and small trees overhanging a pool of Opossum Creek at its exit from Lake Hydaway.

*Diadophis punctatus edwardsii* (northern ringneck snake): Ringneck snakes are quite common throughout Virginia. Numerous specimens have been observed under logs in forested areas of the mountain. Mitchell (1994) does not report a voucher from Campbell County. A specimen is being submitted to the Virginia Museum of Natural History as a voucher.

*Thamnophis s. sauritus* (eastern ribbon snake): Ribbon snakes have not been reported from Campbell Co. (Tobey, 1985; Mitchell, 1994). One specimen was captured in May 1990 along the shore of the unnamed pond along Co. Rt. 677. Unfortunately, the specimen escaped from its container, so the species remains unvouchered.

*Opheodrys aestivus* (rough green snake): Rough green snakes are fairly common in Campbell County although they are difficult to observe because of their arboreal life and camouflaged coloration. A Campbell County record was reported (Hayslett, 1993) from the northern shore of Lake Hydaway. A second

## HERPS OF CANDLER MOUNTAIN

specimen from the same area and a third from about 1.5 km west of Lake Hydaway were also observed.

*Heterodon platirhinos* (eastern hognose snake): The hognose snake has not been reported from Campbell County (Mitchell, 1994). One specimen was observed from the burned peak on Candler Mountain by an ecology class, however, a voucher was never collected.

*Lampropeltis g. getula* (eastern kingsnake): Mitchell (1994) reported that kingsnakes have been observed from Campbell County, but no vouchers have ever been collected. A single specimen was observed along the shore of the unnamed pond along Co. Rt. 677 by an ecology class, but not collected. Thus, the presence of this species remains unverified.

*Agkistrodon contortrix mokasen* (northern copperhead): The copperhead is not uncommon in this area. However, only a single specimen has been observed in five years. This adult was observed at least three times in a two week period at the old sawmill site about 1.5 km NW of Lake Hydaway.

### Frogs

*Rana catesbeiana* (bullfrog): Bullfrogs are very common around the shore of Lake Hydaway, especially the southeastern shore which is shallow and contains numerous cattails and sedges.

*Rana clamitans melanota* (green frog): Green frogs are common along the shore of Lake Hydaway, and Opossum Creek going into and from the lake.

*Rana palustris* (pickerel frog): Pickerel frogs are common along Opossum Creek going into and from the lake. At least one egg mass was found in Lake Hydaway which produced pickerel frogs upon metamorphosis, showing that they breed in the lake.

*Acris c. crepitans* (cricket frog): Cricket frogs are abundant along the shores of Lake Hydaway, especially the southeastern one with abundant aquatic vegetation.

*Pseudacris c. crucifer* (spring peeper): Spring peepers are also found around the lake with large numbers along the SE shore.

*Hyla versicolor* (gray treefrog): Campbell County is in the overlap zone between *H. versicolor* and *H. chrysoscelis*, with *H. versicolor* found in Campbell County (J.C. Mitchell, personal communication). They call from around both Lake Hydaway

and the unnamed pond across Co. Rt. 677 from Camp Hydaway.  
*Bufo a. americanus* (American toad): American toads are found commonly throughout Candler Mountain. They breed in Lake Hydaway, the unnamed pond, and numerous small bodies of water which collect spring rains.

### *Salamanders*

*Ambystoma maculatum* (spotted salamander): Spotted salamanders occur throughout central Virginia. Egg masses and breeding adults were observed in a depression along a stream entering the NW of Lake Hydaway.

*Desmognathus f. fuscus* (northern dusky salamander): Dusky salamanders are common along Opossum Creek.

*Desmognathus monticola jeffersoni* (Virginia seal salamander): Seal salamanders are also common from Opossum Creek and its tributaries. They are sympatric with northern dusky salamanders at least in the stream entering the NW of Lake Hydaway. Tobey (1985) does not indicate this species for Campbell County, however, several specimens are available (J.C. Mitchell, personal communication).

*Eurycea cirrigera* (southern two-lined salamander): Two-lined salamanders are very common in all the streams on and around Candler Mountain. Although Tobey (1985) indicates *Eurycea bislineata* (the northern two-lined salamander) for Campbell County, Ghitea and Sautler (1990) studied the distribution of this species pair and indicate that *Eurycea cirrigera* occurs in Campbell County.

*Eurycea longicauda guttolineata* (Three-lined salamander): Three-lined salamanders have been observed along Opossum Creek leading into Lake Hydaway, and under debris such as boards along the shore of both Lake Hydaway and the unnamed pond across Co. Rt. 677.

*Pseudotriton r. ruber* (red salamander): Larval red salamanders were frequently observed in the stream entering the NW of Lake Hydaway. A few adults were collected from the woods around this stream, under logs and rocks.

*Gyrinophilus p. porphyriticus* (northern spring salamander): Larval spring salamanders were collected from a stagnant man-made pond on the southwestern slope of Candler Mountain. A

## HERPS OF CANDLER MOUNTAIN

cinderblock wall dammed a ravine forming a small woodland pool about 10 m in diameter. The pool's bottom consisted of deep mud and contained many leaves. This was only about 10 m east of US 460 and would have occurred within the City of Lynchburg.

*Plethodon c. cinereus* (red-backed salamander): Although the red-backed salamander is very common in central Virginia, it is much more scarce on Candler Mountain. It has been collected on rare occasion under rocks or logs on the hillsides overlooking the western shore of Lake Hydaway.

*Plethodon cylindraceous* (white-spotted slimy salamander): The slimy salamander is found throughout Campbell County. It is not uncommon to find them under logs on moist hillsides or ravines on Candler Mountain.

*Notophthalmus v. viridescens* (red-spotted newt): Red-spotted newts are abundant in Lake Hydaway. They used to be so in the unnamed pond across Co. Rt. 677. However, in recent years the adult population in this pond has declined noticeably due to unknown reasons. Because water from this pond drains across Co. Rt. 677 into Lake Hydaway, it was feared that a similar decline might occur there as well. However, as of May 1994 the population was still numerous.

### Discussion and Conclusions:

In addition to the above species which were observed, there are several others which were expected but not found. More extensive searching could reveal the presence of these species. *Sternotherus odoratus* (common musk turtle) and *Kinosternon subrubrum* (eastern mud turtle) are frequently found in larger streams and rivers. Since there are only streams on Candler Mt., these species may not occur on the mountain.

*Eumeces inexpectatus* (southeastern five-lined skink) has been reported (Tobey, 1985) from NW of Lawyers in Campbell County, which is approximately 10 km south of Candler Mountain. Although no vouchers are available from the county, this is another species for which herpetologists working in this area should be looking.

There are two snakes (*Storeria dekayi*, brown snake, and *Lampropeltis calligaster*, mole snake) which have been documented from Campbell

County. These species should be present on Candler Mt. as suitable habitat is available. Two additional species (*Tantilla c. coronata*, the southeastern crowned snake and *Lampropeltis t. triangulum*, the eastern milk snake) have been documented from at least two adjacent counties, on either side of Campbell county. These species should also be present in this area.

Among the amphibians, *Rana sylvatica* (wood frog) and *Bufo woodhousii fowleri* (Fowler's toad) could be present on Candler Mountain. Fowler's toad have been documented from this area of Campbell County (Tobey, 1985). The wood frog has also just been documented from northern Campbell County (Hayslett, 1995) and could occur on Candler Mountain and breed in any of the several ponds or small lakes in the area.

There are several salamanders documented from adjacent counties (Tobey, 1985) and are possibly present. *Plethodon hoffmani* (the Valley and Ridge salamander) occurs just west of Campbell County. *Ambystoma opacum* (the marbled salamander) occurs just east of Campbell County. *Hemidactylum scutatum* (the four-toed salamander) has been found both to the east and west of Campbell County. At least one of the ponds included in this survey has extensive sphagnum mass beds, the preferred habitat of four-toed salamanders, growing along its shore. Thus, herpetologists working on Candler Mt. or northern Campbell County should be alert for the presence of all these species.

The Candler Mountain area harbors four of the six species of turtles, five of the six species of lizards, and fourteen of the eighteen species of snakes likely to occur in Campbell County. This gives twenty-three of the thirty possible reptile species. I also recorded the presence of seven of the nine species of frogs and toads, and ten of the thirteen species of salamanders which are likely to occur in Campbell County. This gives seventeen of the twenty-two possible amphibian species. Altogether, there are forty of the fifty-two possible herp species present on Candler Mountain. I attribute this biological diversity to the ecological diversity present. There are streams, ponds and small lakes, lowland marshy areas, and dry ridgetops. These extremely variable habitats coupled with the undeveloped state of the mountain have combined to produce a herpetologist's heaven. Only the future can show what will be preserved as development of this area proceeds. This manuscript is intended to document what was present before development began.

## HERPS OF CANDLER MOUNTAIN

Table 1. Summary of the herpetofauna of Candler Mountain, Campbell County, VA. Species are classified as those observed, those not observed but expected in the area based on published range maps, and the Campbell County records based on specimens from Candler Mountain.

<u>Species</u>	<u>Observed</u>	<u>Not Observed</u>	<u>Co. Record</u>
<i>Terrapene c. carolina</i>	*		
<i>Chelydra s. serpentina</i>	*		
<i>Chrysemys p. picta</i>	*		
<i>Chrysemys c. concinna</i>	*		
<i>Sternotherus odoratus</i>		*	
<i>Kinosternon s. subrubrum</i>		*	
<i>Sceloporus undulatus hyacinthinus</i>	*		*
<i>Eumeces fasciatus</i>	*		
<i>Eumeces inexpectatus</i>		*	
<i>Eumeces laticeps</i>	*		*
<i>Scincella lateralis</i>	*		
<i>Cnemidophorus s. sexlineatus</i>	*		
<i>Diadophis punctatus edwardsii</i>	*		
<i>Storeria o. occipitoaculata</i>	*		*
<i>Storeria d. dekayi</i>		*	
<i>Carphophis a. amoenus</i>	*		
<i>Elaphe g. guttata</i>	*		
<i>Elaphe o. obsoleta</i>	*		
<i>Coluber c. constrictor</i>	*		
<i>Nerodia s. sipedon</i>	*		
<i>Thamnophis s. sirtalis</i>	*		
<i>Thamnophis s. sauritus</i>	*		No Voucher
<i>Regina septemvittata</i>	*		
<i>Opheodrys aestivus</i>	*		*
<i>Heterodon platyrhinos</i>	*		
<i>Lampropeltis g. getulus</i>	*		No Voucher
<i>Lampropeltis calligaster</i>		*	
<i>Lampropeltis t. triangulum</i>		*	
<i>Tantilla c. coronata</i>		*	
<i>Agkistrodon contortrix mokasen</i>	*		
<i>Rana catesbeiana</i>	*		
<i>Rana clamitans melanota</i>	*		
<i>Rana palustris</i>	*		
<i>Rana sylvatica</i>		*	

<i>Acris crepitans</i>	*
<i>Pseudacris c. crucifer</i>	*
<i>Hyla versicolor</i>	*
<i>Bufo a. americanus</i>	*
<i>Bufo woodhousei fowleri</i>	*
<i>Ambystoma maculatum</i>	*
<i>Ambystoma opacum</i>	*
<i>Desmognathus f. fuscus</i>	*
<i>Desmognathus monticola jeffersoni</i>	*
<i>Eurycea cirrigera</i>	*
<i>Eurycea longicauda guttolineata</i>	*
<i>Pseudotriton r. ruber</i>	*
<i>Gyrinophilus porphyriticus</i>	*
<i>Plethodon c. cinereus</i>	*
<i>Plethodon cylindraceous</i>	*
<i>Plethodon hoffmani</i>	*
<i>Notophthalmus v. viridescens</i>	*
<i>Hemidactylum scutatum</i>	*

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## FIELD NOTES

*Rana palustris* (Pickerel Frog). VA: City of Lynchburg, Peaks View Park 16-17 March 1995, Paul Sattler.

On the afternoon of 16 March 1995 while visiting a ditch on the South side of Peaks View Park, I heard what sounded like the low "snoring" calls of *Rana palustris*, the pickerel frog. What was unusual was the low volume of the call, and the fact that the call appeared to be coming from under the surface of the water in the ditch. I revisited the site the following evening and not only recorded the calls using a microphone placed in a plastic bag which was partially submerged, but observed several *Rana palustris* on the bottom of the ditch. The ditch was about one meter wide, one-half meter deep and 25 meters long. It was originally dug to help drain a ball field at the park. Numerous anurans, including *Pseudacris crucifer*, *Bufo americanus*, *Hyla versicolor*, *Acris crepitans*, and *Rana clamitans* had been observed and/or heard breeding at this site in previous years. *Rana palustris* tadpoles had been collected from this site previously. However, *Rana palustris* had never been heard calling at this site. One reason that *Rana palustris* may not have been heard at this site, and possibly others in central Virginia, is that the males are calling from a submerged position. Submerged calls do not travel long distances and may be easily overlooked. Ages ago Wright and Wright (1949. *Handbook of Frogs and Toads*, Cornell Univ. Press, Ithaca, NY 640 pp.) reported that *Rana palustris* may call from underwater, but this does not appear to be common knowledge. When looking, or listening, for *Rana palustris* spring choruses, it would do well to listen for underwater calls which may be drowned out by other species' choruses.

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*Sternotherus minor* (Stripe-necked musk turtle): VA: Lee Co.: Co. Rt. 833 bridge crossing on the Powell river, 06 June 1994, Michael J. Pinder, Mark Ferguson, Steve Sklarew, and Neal Cunningham.

While on a fish sampling trip, we found several specimens of stripe-necked musk turtle *Sternotherus minor* exhibiting nesting behavior on a bank of the Powell river. Walking along a 100 m section of river bank at approximately 11:00 a.m., three turtles were observed ascending the bank and two were excavating nests. No turtles were found laying eggs.

## FIELD NOTES

Measurements were collected from all turtles except those excavating nests which were left undisturbed (Table 1). Carapace and plastron length, and head width were measured using hand calipers (mm) and body mass was measured using a Pesola spring scale (g). Turtles were not palpated for the presence of eggs. Scute counts for all three specimens were 11/11 marginals, 4/4 pleurals, and 5 vertebrals. Nests were dug 4-5 meters from the waters edge in loam-sand substrate. Water temperature at the site was 22.5°C, and stream discharge was 5.82 m<sup>3</sup>/sec. Water visibility was excellent with no recent evidence of elevated stream levels. Weather conditions were light rain showers with sporadic heavy down pours. We were able to photodocument and observe the nesting behavior for approximately 10 minutes until rain storms forced us to find shelter. One hour after the rain stopped and the sun came out, we returned to the nesting site and found no trace of nests or turtles. We stayed at the site for another five hours and failed to find any more specimens.

Our observation is within the mid-May to July time period suggested by Mitchell (1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, D.C. 352 pp.) for the nesting of stripe-necked musk turtles in Virginia. The large number of females leaving the water at one time suggest a possible chemical or physical cue triggering this behavior. Factors related to the rain storm event including changes in water temperature, turbidity, stream flow, or daytime light levels may provide this cue. Although possibly unintended, the rainstorm did provide a mechanism for the turtles to cover any evidence of their nests. Further research on this species should be conducted before determining if these factors are causal.

Table 1. Measurements of female strip-necked musk turtles collected on the Powell river, Lee Co., Virginia, 6 June 1994.

<u>Carapace (mm)</u>	<u>Plastron (mm)</u>	<u>Head Width (mm)</u>	<u>Body Mass (g)</u>
111	85	31.1	210
99	77	26.8	160
111	84	31.1	200

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## FIELD NOTES

*Carphophis Amoenus* (Eastern worm snake): VA: Accomack Co., Chincoteague Island. 16 June 1990. Ralph P. Eckerlin

On 16 June 1990, a large Eastern Worm Snake was found dead in a residential garden on Chincoteague Island, Virginia. The snake had been stepped on by a construction worker and its head was crushed. The snake was preserved in alcohol and saved as a coucher specimen.

Despite some intensive recent work and some older, perhaps more casual collecting efforts, no worm snakes are known from the barrier islands of Virginia (Conant R. et. al., 1990. Herpetofauna of the Virginia Barrier Islands. Va J. Sci. 41:354-380; Mitchell, J.C. 1994. The Reptiles of Virginia. Smithsonian Institution Press, Washington, D.C. 352 pp.; Mitchell, J.C. and J.M. Anderson, 1994. Amphibians and Reptiles of Assateague and Chincoteague Islands. Special Publication Number 2, Virginia Museum of Natural History, Martinsville, VA 120pp.; Tobey, F.J. 1985. Virginia's Amphibians and Reptiles, a Distributional Survey, Virginia Herpetological Society, Purcellville, VA. 114 pp.). Worm snakes occur widely in Virginia and records are known from the Delmarva Peninsula from Accomack and Northampton Counties in Virginia (Mitchell, 1994). An unvouchered record from Wattsville in Accomack County (Reed, C.F. 1958. Contributions to the herpetology of Maryland and Delmarva. No. 13, Piedmont herpetofauna of coastal Delmarva. J. Wash. Acad. Sci. 488: 95-99), only about 12 km W of the present locality, is the closest known site of occurrence. However, Wattsville is separated from Chincoteague Island by about 3 km of salt marsh, a habitat inhospitable to worm snakes. The specimen is a mature male with the following characteristics: total length 236 mm; snout-vent length 190 mm; tail length = 19.5% of total length; subcaudal scales 39; ventral scales 120; dorsal scale rows 13; prefrontal scales paired; supralabial scales 5/5; loreal scales present, touching eye; postocular scales 1/1; temporal scales 1+1/1+1. The snake was collected by me on 16 June 1990 in a residential garden on Jester Street within the incorporated limits of Chincoteague, on Chincoteague Island, Accomack County, VA. The measurements and morphological characters are consistent with those of *Carphophis amoenus amoenus* (Say), the Eastern Worm Snake, as reported by Mitchell (1994). The specimen is in the collections at Northern Virginia Community College - Annandale Campus as accession number WB6515.

## FIELD NOTES

When I collected the snake, I interviewed the construction worker who had killed it and learned that the snake had been shoveled out of a truck with some fill dirt brought to Chincoteague for construction work. the fill dirt had originated in Atlantic, Accomack County, Virginia, about 12 km WSW of Chincoteague, on the mainland of the Delmarva Peninsula.

Perhaps it will be by an inadvertent method such as that recounted here that a population of worm snakes will be introduced and established on a barrier island. Introduced specimens should not be accepted as new distributional records.

Ralph P. Eckerlin  
Natural Sciences Division  
Northern Virginia Community College  
Annandale, Virginia 22003

*Regina septemvitta* (Queen Snake): VA: Rockbridge County, ca .3km SSE of the confluence of the Maury and James Rivers, at Big Cove Branch. 2 September 1995. James H. Scranton.

A queen snake (about 34 cm total length) was captured by hand near the confluence of Big Cove Branch and the James River, upstream from Balcony Falls in the James River Face Wilderness Area. This find represents the first documented voucher for this species from Rockbridge County (Mitchell, J.C. 1994. *The Reptiles of Virginia*. Smithsonian Institution Press, Washington, D.C. 352 pp.).

The specimen is being maintained live at "The Nature Zone" facility in Lynchburg. Slides will be forwarded to the VHS archives to voucher the snake.

Mike Hayslett, and Jim Scranton  
Lynchburg Parks & Recreation Division  
301 Grove Street  
Lynchburg, VA 2401

## FIELD NOTES

*Rana sylvatica* (Wood Frog). VA: Craig Co., Potts Mountain, Potts Pond, 11.25 km N of New Castle, 06 March 1995, Michael W. Donahue and Michael King.

During an outing to obtain evidence of early Wood Frog (*Rana sylvatica*) and Spotted Salamander (*Ambystoma maculatum*) breeding activity of the Potts Pond area, Mike King and I were witness to the pre-nuptial chorus and breeding activities of the Wood Frog. The morning temperature was 45-50 degrees and the sky was clear.

After finding a few Wood Frogs around the outer edges of the minor ponds, we decided to investigate the general area for other potential breeding sites. Mike King detected a distant duck-like clacking sound. As we made our way closer to the source of the calling it became obvious that this was the work of the Wood Frogs. As we continued inching our way toward the largest pond, we noticed the Wood Frogs were literally covering the forest floor. We then decided to sit at the edge of the sunlit pond to observe this event. Wood Frogs were emerging from within the leaf litter and proceeding without interruption to the pond. We viewed these activities for about an hour and the intensity of the sound and numbers of individuals never changed. It is conceivable that there were 1000 to 1800 frogs within the area of these natural ponds. As we left the pond, we could detect no decrease in their numbers or activity, and by this time many individuals were in amplexus.

Spotted Salamander egg masses were found around the edges of the larger ponds, but no adults were found.

No vouchers were taken.

Michael W. Donahue  
4814 Bandy Rd. SE Apt. #4  
Roanoke, Virginia 24014

## FIELD NOTES

*Storeria dekayi dekayi* (Northern Brown Snake): VA: Botetourt County, Rt. 622, 2.4 km N of Rt. 614 at Solitude. 18 March 1995. Michael W. Donahue.

While on an outing along Rt. 622 to inventory a vernal pool for herps my wife, Hannah, spotted a roadkill snake. Upon close inspection, I discovered that a Northern Black Racer (*Coluber c. constrictor*) was in the process of devouring a Northern Brown Snake (*Storeria dekayi dekayi*) before both had succumb to an automobile. Approximately 14.5 cm of the N. Brown Snake remained outside of the N. Black Racer and a rupture in the side of the Racer allowed close inspection of the head of the N. Brown Snake.

Limited field searches in and around the swamp edge that evening produced no other N. Brown Snakes. However, a single adult Spotted Salamander (*Ambystoma maculatum*), several Spotted Salamander egg masses and numerous tadpoles were found in the general vicinity. Also of note, was a chorus of Wood Frogs (*Rana sylvatica*) and Spring Peepers (*Pseudacris crucifer*).

This locality represents a record for the Northern Brown Snake in Botetourt County (Mitchell, J.C. 1994. *The Reptiles of Virginia*, Smithsonian Institution Press, Washington, D.C. 352 pp.)

These voucher specimens have been submitted to Dr. Richard Hoffman for disposition with the Virginia Museum of Natural History, Martinsville.

Michael W. Donahue  
4814 Brandy Rd. SE Apt. #4  
Roanoke, Virginia 24014

## FIELD NOTES

*Hemidactylum acutatum* (Four-toed Salamander): VA: Augusta County, ca. 4 km WNW of the intersection of FR 42 and VA 664. 7 May 1995. Michael S. Hayslett and James H. Scranton.

A lone, adult Four-toes Salamander was discovered inside a decaying pine log along the margin of a "sphagnum swamp pond", at the southwestern corner of the Maple Flats Research Natural Area, on the George Washington National Forest. The habitat may be described as a seasonally-flooded, woodland pond in mixed hardwoods (Red Maple dominant) of ca. 30 yards diameter. Sphagnum moss and shrub heaths were abundant throughout, as were rotten cover logs along the margin of this vernal wetland. Redback Salamanders (*Plethodon cinereus*) were common under the perimeter logs, and spent Spotted Salamander (*Ambystoma maculatum*) jelly littered the dark, tannic waters.

This specimen represents the first known voucher for the species from Augusta County (Tobey, F.J. 1985. Virginia's Amphibians and Reptiles: A Distributional Survey, VHS, Purcellville, VA 114 pp., and J.C. Mitchell, pers. comm.) and an expected addition to the impressive assemblage of herpetofauna found in the Maple Flats ecosystem. The voucher will be forwarded to the Virginia Museum of Natural History for final disposition.

Michael S. Hayslett  
Lynchburg Parks & Rec Division  
301 Grove Street  
Lynchburg, VA 24501

*Rana sylvatica* (Wood Frog): VA: Campbell County, ca. .25 km SW of the terminus of VA 635 at Melrose, VA. 7 March 1995, David A. Dawson.

An adult wood frog was brought to me on 13 March by a student of the "Lynchburg Master Naturalist Course" for identification. The frog had been discovered on a cool, overcast afternoon sitting along the margin of a temporary pool, which had formed in a canal remnant near the floodplain of the Staunton River. Several others were observed at the site, indicating that this series of temporary wetlands may serve as a breeding facility for this obligatory vernal pool anuran.

## FIELD NOTES

Upon examination of the literature and personal communication with J. Mitchell for supplemental data, I concluded that the live specimen represented a voucher for the Campbell county record (Tobey, F.J. 1985. Virginia's Amphibians and Reptiles: A Distributional Survey, VHS, Purcellville, VA 114 pp.). The wood frog remained in captivity at "The Nature Zone" facilities until July. The voucher will be forwarded to The Virginia Museum of Natural History for disposition.

Michael S. Hayslett  
Lynchburg Parks & Rec Division  
301 Grove Street  
Lynchburg, VA 24501

### **Dues Notice:**

Dues for the Virginia Herpetological Society run from January to December. It is time to think about sending in your 1996 dues. If you are coming to the Fall meeting in Lynchburg you could plan on paying another year's dues then.

## PRESIDENT'S CORNER

My term as President is ending and I am sitting here in front of the computer reminiscing through my tenure with the VHS. The first meeting I attended was held at the Virginia Museum of Natural History in Martinsville, in April, 1987. Though my memory may be a little foggy, I believe there were only seven people present. There was a brief business meeting, we had lunch at a local restaurant, and then we did some collecting. Overall, my first experience after driving four hours from Virginia Beach was not very impressive except for some of the members present. They included Joe Mitchell, Richard Hoffman, Chris Pague, and Don Schwab. If it had not been for their enthusiasm and dedication to Virginia's herps, and the desire to share these attributes with others, I don't believe I would have gotten so involved with the VHS - except to continue to pay my dues and receive *Catesbeiana* twice a year.

Thanks to Chris Pague, I was elected as Secretary and Treasurer at my third meeting (Radford University, October, 1988). My goals as S & T were to organize the Society's records and to increase the membership roll and treasury. I served in that capacity for five years. During that time, with Joe Mitchell as President, the treasury went from approximately \$600 to over \$3000, and the membership reached as high as 140 members. I am very pleased that the VHS continues to have a strong membership and treasury. Terry Spohn was very instrumental in my becoming President. His inspiring words "I nominate Ron Southwick" were all it took, and the rest is history. My goals as president were to increase participation at our meetings and to continue Joe Mitchell's quest to produce a snake poster. Unfortunately, the snake poster did not become a reality for me either. Good luck, Paul!

Looking back, I had many great times with the VHS. The meetings carried me to all parts of Virginia from the coastal dunes and swamps of Tidewater to the mountains and rivers in extreme southwest Lee County, to collecting herps in populace northern Virginia. I had the opportunity to work side by side with many of the state's herp experts and able to see a plethora of Virginia's herp fauna. A few of my more memorable experiences include collecting herps in the snow in northern Virginia, seeing and photographing the rare chicken turtle in Seashore State Park, road cruising for herps (bagels) in the middle of the night with Joe Mitchell and Richard Hoffman, and collecting the first recorded "live" specimen of a black kingsnake in Lee County. I have experienced dozens of other unforgettable episodes associated with the Society and its members, and look forward to many more.

The Fall meeting date is quickly approaching. Though I am looking forward to handing over the gavel to Paul Sattler, I think I will miss being an integral part of the Society. During my years as a VHS officer, I have met many people who share the same attributes that initially got me involved with Society. This has made my years both as Secretary/Treasurer and President a most rewarding experience. I thank these people and the rest of the membership for giving me the opportunity to serve the Virginia Herpetological Society.

At the Fall meeting in Lynchburg, we will be electing a President-elect which will take office after Paul Sattler in the Fall of 1997, and a Secretary/Treasurer to serve during Paul's term. If any member in good-standing would like to run for one of these offices please let me know soon, or be present at the business meeting for nomination.

As is customary for the Fall meetings, we will conduct an educational program before the business meeting and paper session. In the past, these programs were geared for young audiences. This year, with the help of Suzie Gilley and Carol Heiser from the Department of Game and Inland Fisheries, there will be a workshop for school teachers. The workshop will cover native reptile and amphibian identification, classroom care, threatened and endangered species, and laws and regulations concerning captive herps. Additional information about the workshop will be sent to Lynchburg/Roanoke area teachers soon. VHS members are always welcomed to attend these programs.



## RESULTS OF THE 1995 SPRING MEETING & FIELD TRIP

Michael S. Hayslett  
Lynchburg, Virginia

The VHS held its Spring Meeting at Fort A.P. Hill in Caroline County on April 28-30 of this year, with over 32 individuals in attendance. On the evening of the 29th, we were treated with a delightful slide presentation by VHS veteran, Dale Brittle, who has been herping Caroline County and teaching her students about the area's amphibians and reptiles for many years. Highlights of the weekend forays included opportunities to see and hear the rare Carpenter frog (*Rana virgatipes*). The night choruses of this Special Concern species sounded like a distant roofing crew diligently driving nails. The first Ground Skink (*Scincella lateralis*) captured for the weekend proved to be the Caroline county record for this species. Participants had the chance to explore an interesting variety of woodland and wetland habitats, which led to the discovery of 26 species of herpetofauna.

### Anurans:

Green Frog (*Rana clamitans melanota*)  
Northern Cricket Frog (*Acris c. crepitans*)  
Carpenter Frog (*Rana virgatipes*)  
Spring Peeper (*Pseudacris c. crucifer*)  
Pickerel Frog (*Rana palustris*)  
Fowler's Toad (*Bufo woodhousei fowleri*)  
Cope's Gray Treefrog (*Hyla chrysoscelis*)  
American Bullfrog (*Rana catesbeiana*)

### Salamanders:

White-spotted Slimy Salamander (*Plethodon cylindraceous*)  
Spotted Salamander (*Ambystoma maculatum*)  
Red-spotted Newt (*Notophthalmus v. viridescens*)  
Northern Two-lined Salamander (*Eurycea bislineata*)  
Northern Red Salamander (*Pseudotriton r. ruber*)  
Northern Dusky Salamander (*Desmognathus f. fuscus*)

**Snakes:**

Eastern Garter Snake (*Thamnophis s. sirtalis*)  
Eastern Worm Snake (*Carpophis a. amoenus*)  
Northern Ringneck Snake (*Diadophis punctatus edwardsii*)  
Northern Watersnake (*Nerodia s. sipedon*)  
Northern Black Racer (*Coluber c. constrictor*)

**Turtles:**

Redbelly Turtle (*Pseudemys rubriventris*)  
Common Musk Turtle (*Sternotherus odoratus*)  
Common Snapping Turtle (*Chelydra s. serpentina*)  
Eastern Painted Turtle (*Chrysemys p. picta*)

**Lizards:**

Five-lined Skink (*Eumeces fasciatus*)  
Northern Fence Lizard (*Sceloporus undulatus hyacinthinus*)  
Ground Skink (*Scincella lateralis*)



**ANNOUNCEMENT**  
**FALL 1994 MEETING OF THE**  
**VIRGINIA HERPETOLOGICAL SOCIETY**

The Fall 1994 VHS meeting will be held on 28 October at Liberty University in Lynchburg, Virginia.

Schedule:	8:30 am	Herp Workshop for Teachers
	10:30 am	Business Meeting
	12:00 pm	Lunch
	1:30 pm	Announcements Elections Afternoon Sessions Social

This year Doug Eggleston, Suzie Gilley, Mike Hayslett, Carol Heiser, and Mike Pinder will conduct the educational workshop. The workshop is being directed specifically toward teachers and will include information on the identification and captive care of local amphibians and reptiles, regulations regarding endangered species and the collecting and/or holding of herps, and possible classroom activities.

Please bring a contribution of food or drink to share at the social which will follow the afternoon paper session. We will again have Joe Mitchell's new book "The Reptiles of Virginia" available at the meeting for the discounted VHS price of \$32. If you did not pick one up at the last Fall Meeting this is the perfect opportunity. Joe will be available for book-signing during the Social. We will also have a number of herps available to photograph and/or admire. Please bring any unusual species that you would be willing to have photographed. We will have a variety of backgrounds available for this. The Fall Meeting is a great time for interacting with our widely dispersed membership. Please plan on joining us.

If you would like to present a paper during the afternoon session, please call Paul Sattler at 804-582-2209 (work) or 804-385-6605 (home), or send a note giving your title to the co-editors of *Catesbeiana*. Presentations should be about 15-20 minutes in length.

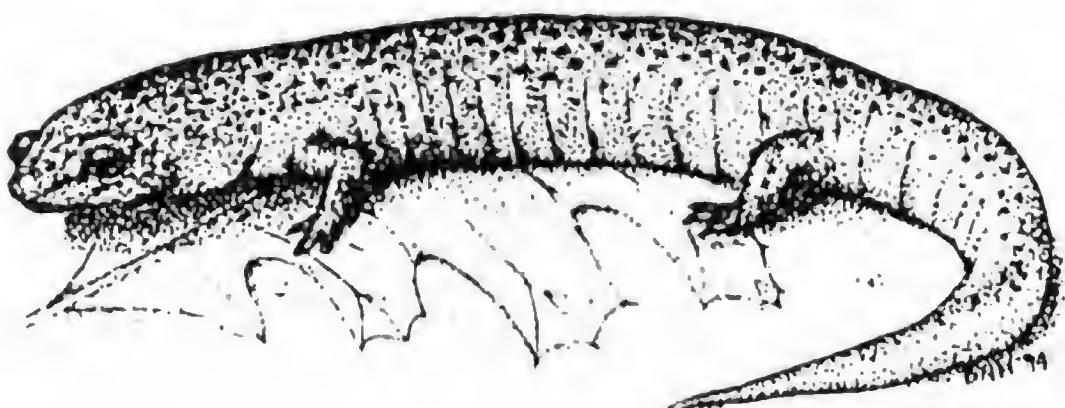
**Directions to Liberty University:**

**From 29 North of Lynchburg take the second Candlers Mountain Road exit (marked for Liberty University), follow the sign for Liberty University turning right just past River Ridge Mall, turn right at the second traffic light and follow the VHS signs on campus to Science Hall.**

**From 460 East of Lynchburg take the Liberty University exit and turn left at the first traffic light, following the VHS signs on campus to Science Hall.**

**From 460 West of Lynchburg take the bypass towards Appomattox instead of the Lynchburg Expressway. Take the Candlers Mountain Road exit (marked for Liberty University). At the exit's stop sign, go straight onto the campus and follow the VHS signs to Science Hall.**

**From 29 South of Lynchburg you may turn right onto the unmarked back entrance just after the Super Clean Car Wash and before the River Ridge Auto Body Shop (across from Wal Mart) and cross the Railroad tracks onto campus, following the VHS signs to Science Hall.**



Pseudoeurycea subterranea

## MEMBERSHIP APPLICATION

I wish to  initiate  renew membership in the Virginia Herpetological Society for the year 19 .

I wish only to receive a membership list. Enclosed is \$1.00 to cover the cost.

Name

Address

Phone

Dues Category:  Regular  Family  Under 18  Life  
(\$10.00)            (\$12.50)            (\$6.00)            (\$150)

Interests:  Reptiles  Amphibians  Captive Husbandry  
 Distribution  Research  
 Specifically

Make checks payable to the Virginia Herpetological Society and send to the treasurer: Robert Hogan, P.O. Box 603, Troutville, VA 24175.



## Field Notes

This section provides a means of publishing natural history information on Virginia's amphibians and reptiles that does not lend itself to full-length articles. Observations on geographic distribution, ecology, reproduction, phenology, behavior, and other areas are welcomed. Reports can be on single species or fauna from selected areas, such as a state park or county. The format of the reports is species' scientific name (common name): State abbreviation: County, locality. Date. Observer(s) or collector(s). Report or observations given one line below the data mentioned above. Author(s) name and address are given one line below the report or observation. Consult published notes or the editor if your information does not readily fit this format.

If the note contains information on geographic distribution, a voucher specimen or color slide should be sent for verification and deposited in a permanent museum or sent to the Virginia Herpetological Society. Species identification for observational records should be verified by a second person.

The correct citation format: Tobey, F.J. 1989. Field notes: *Coluber constrictor constrictor*. *Catesbeiana* 9(2):35.

## Herpetological Artwork

Herpetological artwork is welcomed. If the artwork has been published elsewhere, we will need to obtain copyright before we can use it in an issue. We need drawings and encourage members to send us anything appropriate, especially their own work.